

an illumination system, and  
a reticle with magnesium fluoride as support material,  
in which said illumination system provides radially polarized light and said  
magnesium fluoride is oriented with its crystal principal axis substantially in the  
direction of the optical axis at said reticle.

Claim 9: An illumination equipment for microlithography comprising:  
an illumination system,  
a reticle with support material of transparent optically uniaxial crystal,  
in which said illumination system provides radially polarized light and said  
support material is oriented with its principal axis substantially in the direction of  
the optical axis at said reticle.

Claim 10: The illumination equipment according to claim 8 or 9 with a cooling  
device with a flowing fluid.

Claim 11 (Amended twice): The reticle according to claim 18, further comprising a  
fluid cooling system.

Claim 13 (Amended twice): The reticle according to claim 19, in which said flat plate  
comprises crystal.

Claim 14 (Amended twice): The reticle according to claim 13, in which said crystal  
comprises one of  $\text{CaF}_2$  and  $\text{MgF}_2$ .

Claim 15 (Amended twice): A pellicle of fluoride crystal.

Claim 16: The pellicle according to claim 15, comprising a fluoride selected from the  
group consisting of  $\text{CaF}_2$ ,  $\text{BaF}_2$ , or  $\text{MgF}_2$ .

Claim 17: A reticle with support material of transparent, optically uniaxial crystal, in which the principal axis of said crystal is oriented perpendicular  $\pm 5^\circ$  to the surface of said reticle.

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*B3* Claim 18 (Amended): A reticle based on  $\text{MgF}_2$  as support material, in which the principal axis of said  $\text{MgF}_2$  is oriented perpendicular  $\pm 5^\circ$  to the surface of said reticle.

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Please add the following new claim 19:

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*B4* Claim 19: An illumination equipment for microlithography comprising:  
an illumination system,  
a reticle with an optical axis and support material of transparent optically uniaxial crystal,  
wherein said illumination system provides radially polarized light and said support material is oriented with its principal axis substantially in the direction of said optical axis at said reticle,  
further comprising at least one flat plate arranged parallel at said reticle, in which a fluid flows between said reticle and said at least one flat plate.

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